

## APPENDIX C. Statewide Resource Quality Summary For Significant Publicly Owned Lakes

In Illinois, *significant publicly owned lakes* are publicly owned inland lakes with a surface area of 20 acres or more. Also included are some lakes in Cook County that are less than 20 acres, but provide substantial public access and benefits to the citizens of Illinois. The summary information below is a subset of all lakes assessed and reported in Section C-3 of this report.

### Individual Use Support

*Fish consumption, aquatic life, primary contact, public and food processing water supply, secondary contact, aesthetic quality, and indigenous aquatic life* uses were individually assessed for the degree of use support (Appendix Table C-1).

**Appendix Table C-1. Summary of Assessments of Use Attainment for Significant Publicly Owned Lakes.**

Designated Use	Statewide Acres Designated	Acres Assessed	Acres Fully Supporting	Acres Not Supporting Fair	Acres Not Supporting Poor	Acres Not Assessed	Acres as Insufficient Information
Aesthetic Quality	160,545	131,443	14,898	108,014	8,531	28,043	1,059
Aquatic Life	160,545	131,463	121,302	10,122	39	28,023	1,059
Fish Consumption	162,145	85,710	4,200	80,916	594	76,435	0
Indigenous Aquatic Life	1,600	1,600	1,600	0	0	0	0
Primary Contact	160,545	1,481	1,092	389	0	159,064	0
Public and Food Processing Water Supply	74,828	74,655	15,153	59,502	0	173	0
Secondary Contact	162,145	1,092	1,092	0	0	161,053	0

### Statewide Potential Causes of Use Impairment

Potential causes of use impairment in significant publicly owned lakes are summarized below in Appendix Table C-2. Potential causes having the greatest effect on lake acres assessed include: total suspended solids, phosphorus, and aquatic algae.

**Appendix Table C-2. Potential Causes of All Use Impairments in Significant Publicly Owned Lakes.**

<b>Potential Cause of Impairment</b>	<b>Acres Impaired</b>
Total Suspended Solids (TSS)	120,659
Phosphorus (Total)	111,056
Aquatic Algae	105,307
Mercury	73,591
Manganese	59,094
Aquatic Plants (Macrophytes)	31,491
Polychlorinated biphenyls	25,657
Oxygen, Dissolved	5,374
Chlordane	4,820
Turbidity	4,660
Sedimentation/Siltation	4,511
Silver	4,194
Cause Unknown	3,628
Aldrin	3,345
Atrazine	3,192
pH	1,998
Total Dissolved Solids	635
Nonnative Fish, Shellfish, or Zooplankton	604
Color	525
Endrin	524
Cadmium	524
Zinc	524
Fecal Coliform	389
Nickel	325
Fish Kills	172
Nitrogen, Nitrate	172
Hexachlorobenzene	172
Simazine	74
Ammonia (Total)	39

**Statewide Potential Sources of Use Impairment**

Potential sources of use impairment in significant publicly owned lakes are summarized below in Appendix Table C-3. Potential sources having the greatest effect on lake acres assessed include: source unknown, littoral/shore area modifications (non-riverine), and crop production (crop land or dry land).

**Appendix Table C-3. Potential Sources of All Use Impairments in Significant Publicly Owned Lakes.**

<b>Potential Source of Impairment</b>	<b>Acres Impaired</b>
Source Unknown	103,126
Littoral/shore Area Modifications (Non-riverine)	95,627
Crop Production (Crop Land or Dry Land)	92,429
Other Recreational Pollution Sources	81,307
Atmospheric Deposition - Toxics	72,913
Runoff from Forest/Grassland/Parkland	50,750
Urban Runoff/Storm Sewers	38,966
Municipal Point Source Discharges	27,642
Animal Feeding Operations (NPS)	25,355
Contaminated Sediments	14,926
Agriculture	12,332
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	9,887
Dredging (E.g., for Navigation Channels)	9,038
Rcra Hazardous Waste Sites	8,984
Golf Courses	6,517
Natural Sources	6,251
Waterfowl	4,591
Yard Maintenance	3,488
Industrial Point Source Discharge	2,153
Impacts from Hydrostructure Flow Regulation/modification	1,890
Rural (Residential Areas)	1,457
Dam or Impoundment	1,425
Other Turf Management	1,153
Internal Nutrient Recycling	1,040
Pesticide Application	862
Highway/Road/Bridge Runoff (Non-construction Related)	727
Residential Districts	716
Site Clearance (Land Development or Redevelopment)	613
Sediment Resuspension (Clean Sediment)	314
Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)	225
Lake Fertilization	183
Wildlife Other than Waterfowl	140
Unspecified Urban Stormwater	129
Impervious Surface/Parking Lot Runoff	117
Pollutants from Public Bathing Areas	96
Introduction of Non-native Organisms (Accidental or Intentional)	80
Municipal (Urbanized High Density Area)	62
Specialty Crop Production	61
Streambank Modifications/destabilization	55
Other Spill Related Impacts	40
Livestock (Grazing or Feeding Operations)	39

## Trophic Status

The trophic status of significant publicly owned lakes is summarized in Appendix Table C-4. Lake trophic status is based on the Trophic State Index (TSI). Most lake acreage was classified as eutrophic or hypereutrophic.

**Appendix Table C-4. Trophic Status of Significant Publicly Owned Lakes.**

<b>Trophic Status</b>	<b>Number of Lakes</b>	<b>Total Acres</b>
Hypereutrophic (TSI $\geq 70$ )	77	65,967
Eutrophic (TSI $\geq 50$ & $< 70$ )	147	60,061
Mesotrophic (TSI $\geq 40$ & $< 50$ )	39	7,791
Oligotrophic (TSI $< 40$ )	6	404
Unknown	98	27,922
Total:	367	162,145